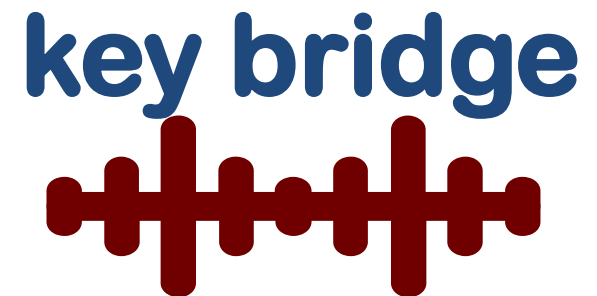


Wireless Service Information Format

Implementation Standard for White Space Operations

Executive Summary

October 2011



- The Wireless Service Information Format (WSIF) is intended as an information formatting scheme to support other related computer software frameworks and implementations for the presentation, validation, persistence and communication of wireless service descriptions. It seeks to :
 - Provide generalized machine and human-readable descriptions of wireless transmitters and receivers
 - Provide standardized Geo-location information format
 - Efficiently support cross-domain spectrum administration and frequency coordination
 - Assist network planning and wireless service coexistence
 - Enable storage, retrieval and long-term archival of wireless service records, frequency reservations and other related information
 - Support the implementation of white space administration in the TV broadcast bands

What is WSIF

- WSIF is an information formatting and encoding strategy
- WSIF completely describes all aspects of a wireless service
 - Broadcast only stations
 - Receive only stations
 - Point to point
 - Point to multi-point
 - Many-to-many (Full and partial mesh)
- WSIF supports all aspects of US white space operation
- WSIF is a commercial specification
- WSIF is open and freely available

What WSIF is Not

- WSIF is NOT a white space database
- WSIF does not specify a security strategy
- WSIF is not a formal standard
 - (It is a commercial specification)
- WSIF is not finalized
 - (Mature but not final)

Why a New Format

- Formats exist for the communication of frequency occupancy and reservation. For example:



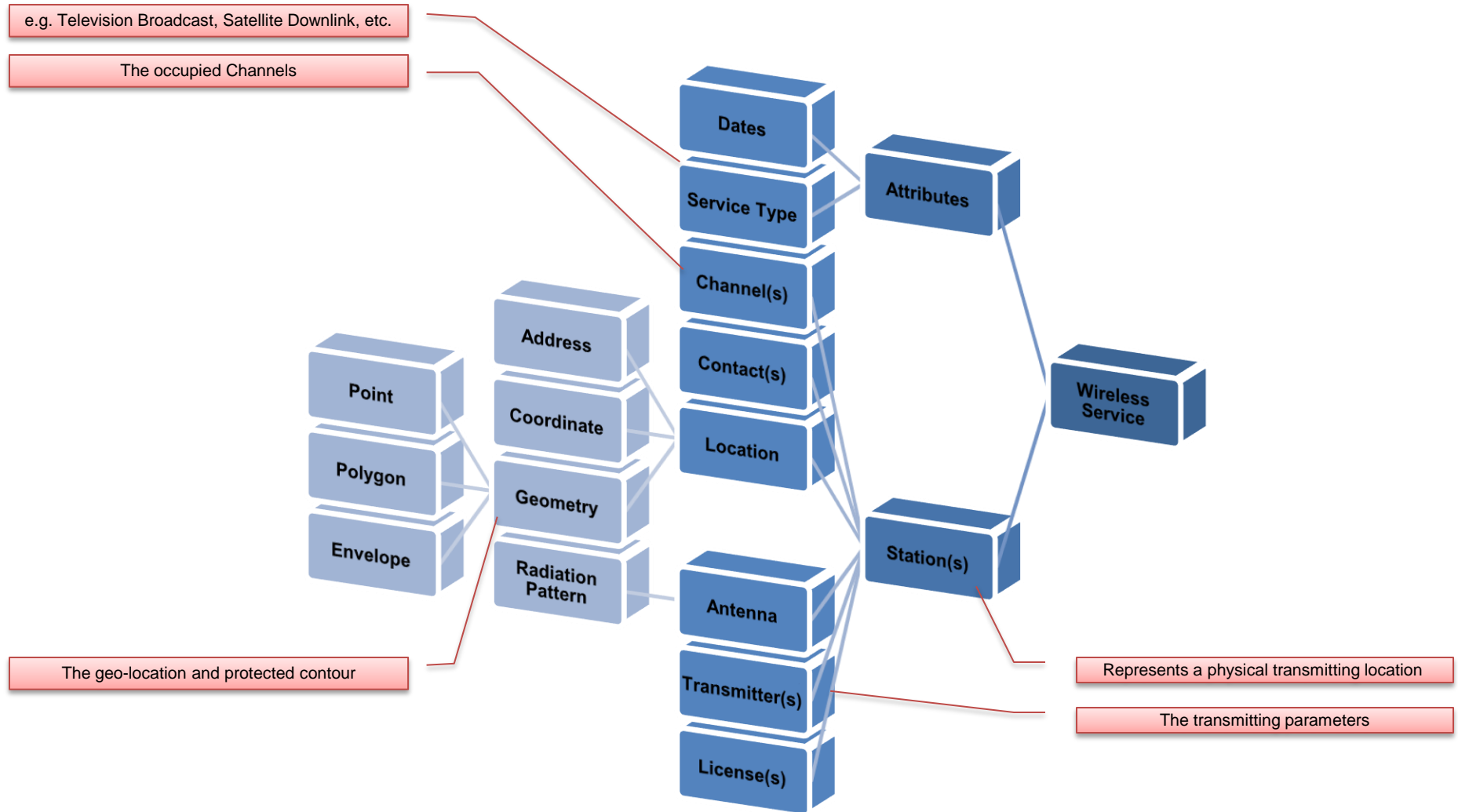
Military Communications-Electronics Board:
Standard Spectrum Resource Format (MCEB Pub 8)



Defense Information Systems Agency:
Global Electromagnetic Spectrum Information System (GEMSIS)

- MCEB Pub 8 is not used outside the Government
 - No standards exist that accommodate white space requirements
 - Commercial ad-hoc solutions are narrowly written, are proprietary and not extensible.
- An standards-based solution is required to enable the formatting, encoding and automated exchange of generalized wireless service information.

WSIF Object Model Hierarchy



WSIF:

Geospatial standards

- OpenGIS SFA
- W3C Geolocation API
- OpenStreetMap
- GeoBase
- NASA SRTM Elevation

Antenna Definitions

- NSMA Antenna Format

Scheduling

- IETF RFC 5545 iCalendar

Contact definitions

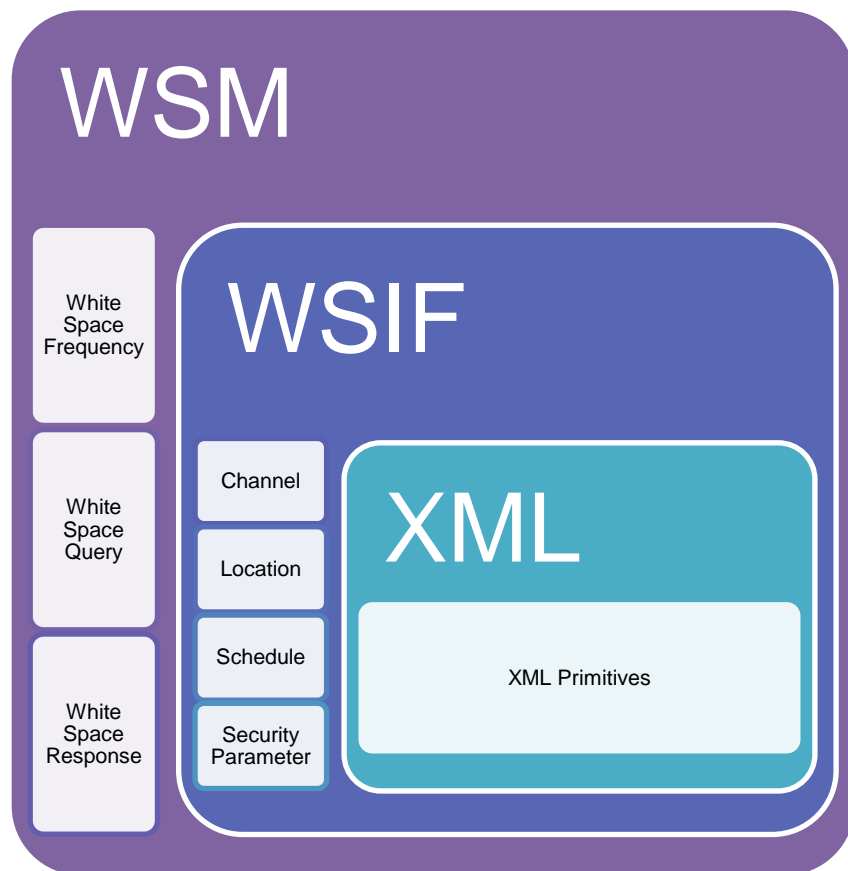
- IETF RFC 6350 vCard

Reference Database Schemas

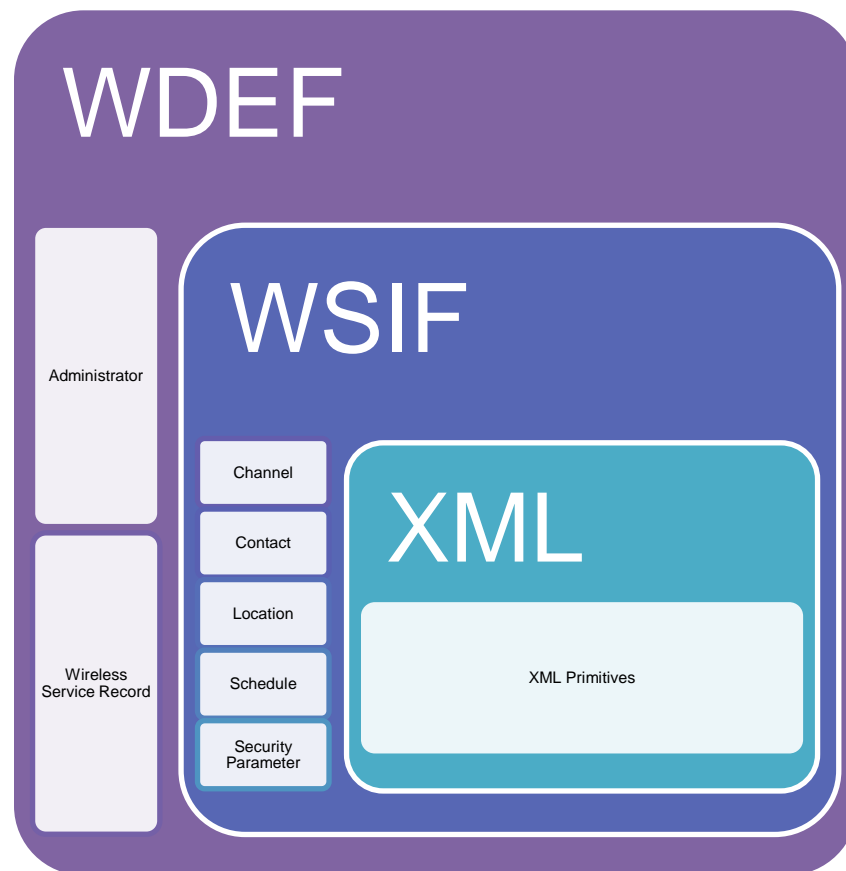
- FCC ULS
- FCC CDBS
- FCC EAS
- FCC IBFS
- FCC COALS
- US Census Bureau Tiger Database
- USPS Zip Code Database

Building Implementations for White Space

Format for White Space Messaging (WSM)



Format for WSIF Distribution and Exchange (WDEF)



Key Bridge Global LLC

1600 Tysons Blvd., Suite 1100

McLean, VA 22102

information@keybridgeglobal.com

